MATHEMATICS

Class-VII

Topic-10

PROBABILITY

PROBABILITY

CHAPTER 10

TERMINOLOGIES

Experiment, Random Experiment, Sample Space,Trial, Favourable Event, Favourable events, Probability, Even chance, Sure (Certain) chance, Impossible (No) chance, Good chance, Poor chance,

INTRODUCTION

In everyday life, we come across statements such as :
(i)   Chances are high that India will win cricket match today .
(ii)   I doubt that Ram will pass this year.
(iii)   Most probably it will rain today.

The words 'chances', 'doubt', 'most probably' show uncertainity or probability of occurence of an event, which in mathematical language is called **probability.**
The concept of probability originated in the beginning of eighteenth century and started with gambling in problems pertaining to games of chance such as throwing a dice, tossing a coin etc. Now probabilty is used extensively in science , commerce, biological sciences, weather forecasting etc.

10.1 PROBABILITY

(a)   Definitions

Experiment : An operation which can produce some well defined outcomes, is called an **experiment**.
Each outcome is called an **event**.

Random Experiment : An experiment, when repeated under identical conditions does not produce the same outcome every time. For example, in tossing a coin, one is not sure that if a head will be obtained or a tail. So it is a **random experiment**.

Sample Space : The collection of all possible out comes of a random experiment is called a **sample space** associated with it and is generally denoted by **S.** For example, When a die is thrown then $S = \{ 1, \ 2, \ 3, \ 4, \ 5, \ 6 \}$.

Trial : Trial means performing a random experiment.
For example : Tossing a coin, Throwing a dice.

Outcome of an experiment : The different   possibilities which can occur during an experiment is called an outcome of an experiment.

Favourable Event : Let S be a sample space associated with a random experiment and **A** bean event associated with the random experiment. The elementary events belonging to **A** are known as **favourable events** to the event **A**.
For example : In throwing a pair of dice, A is defined by "Getting 8 as the sum". Then following elementary event has : (2, 6), (3, 5), (4, 4), (5, 3), (6, 2) as favourable outcomes.

(b) Probability

Theory of probability deals with measurement of uncertainty of the occurrence of some event or incident in terms of percentage or ratio.

Probability of an event A : Written as P(A) in a random experiment and is defined as :

$$P(A) = \frac{\text{Number of outcomes in favour of A}}{\text{Total number of possible outcomes}}$$

Important Properties :

(i) $0 \le P(A) \le 1$

(ii) P (not happening of A) + P (happening of A) = 1

or $P(\bar{A}) + P(A) = 1$

$\therefore$ $P(\bar{A}) = 1 - P(A)$

The chances of happening of an event are classified as :

(i) Even chance : If the chances of happening and not happening of an event are same, we say that the event has **even chances** of happening. For example, the chance of a newly born baby to be a girl is even.

(ii) Sure (Certain) chance : If we throw a die, there is a sure chance of getting one of the numbers 1, 2, 3, 4, 5 or 6. Such events are called **sure events**.

(iii) Impossible (No) chance : There is no chance that it will rain everyday in Delhi in one year. Such events are called **impossible events**.

(iv) Good chance : If an event is more likely to happen than not to happen, it is said to have **good chance** of happening.

(v) Poor chance : If an event is less likely to happen than not to happen, it is said to have **poor chance** of happening.

Illustration 10.1

A die is thrown once. What is the probability of :
(i)   Getting an even number in the throwing of a die.
(ii)   Getting an odd number.
(iii)   Getting a natural number.
(iv)   Getting a number ≥ 3.
(v)   Getting a number ≤ 5.

Sol.   **(i)**   The total number of outcomes is 6.
Let A be the event of getting an even number then there are three even numbers 2, 4, 6.

$\therefore$ Number of favourable outcomes = 3.

$\therefore$ $P(A) = \dfrac{\text{No. of favourable outcomes}}{\text{Total no. of outcomes}} = \dfrac{3}{6} = \dfrac{1}{2}$.

(ii)   Let B be the event of getting an odd number then there are three odd numbers 1, 3, 5.

$\therefore$ Number of favourable outcomes = 3.

$\therefore$ $P(B) = \dfrac{\text{No. of favourable outcomes}}{\text{Total no. of outcomes}} = \dfrac{3}{6} = \dfrac{1}{2}$.

(iii) Let C be the event of getting a natural number then there are six natural numbers 1, 2, 3, 4, 5, 6.

∴ Number of favourable outcomes = 6.

∴ P(C) = $\dfrac{\text{No. of favourable outcomes}}{\text{Total no. of outcomes}} = \dfrac{6}{6} = 1$

(iv) Let D be the event of getting a number greater then or equal to 3. then there are four numbers 3, 4, 5, 6.

∴ Number of favourable outcomes = 4.

∴ P(D) = $\dfrac{\text{No. of favourable outcomes}}{\text{Total no. of outcomes}} = \dfrac{4}{6} = \dfrac{2}{3}$.

(v) Let E be the event of getting a number less then or equal to 5, then there are five numbers 1, 2, 3, 4, 5.

∴ Number of favourable outcomes = 5.

∴ P(E) = $\dfrac{\text{No. of favourable outcomes}}{\text{Total no. of outcomes}} = \dfrac{5}{6}$.

Illustration 10.2

A coin is tossed. Find the probability of getting :
(i) head   **(ii)** tail

Sol. Let H denotes head and T denotes tail.

∴ On tossing coin, the possible outcomes are H, T.

(i) The Probability of getting head

= P (H) = $\dfrac{\text{Event of occurrence of head}}{\text{Total number of possible outcomes}} = \dfrac{1}{2}$

(ii) The probability of getting tail = $\dfrac{\text{Favourable outcomes}}{\text{Total no. of outcomes}} = \dfrac{1}{2}$

Illustration 10.3

A bag contains 5 red balls, 8 white balls, 4 green balls and 7 black balls. If one ball is drawn at random, find the probability that it is :

(i) Black   **(ii)** Not red   **(iii)** Green

Sol. Number of red balls in the bag = 5

Number of white balls in the bag = 8

Number of green balls in the bag = 4

Number of black balls in the bag = 7

∴ Total number of balls in the bag = 5 + 8 + 4 + 7 = 24.

Drawing balls randomly are equally likely outcomes.

∴ Total number of possible outcomes = 24

Now,

(i) There are 7 black balls, hence the number of such favourable outcomes = 7

∴ Probability of drawing a black ball

= $\dfrac{\text{Number of favourable outcomes}}{\text{Total number of possible outcomes}} = \dfrac{7}{24}$

(ii) There are 5 red balls, hence the number of such favourable outcomes = 5.

∴ Probability of drawing a red ball

= $\dfrac{\text{Number of favourable outcomes}}{\text{Total number of possible outcomes}} = \dfrac{5}{24}$

$\therefore$ Probability of drawing not a red ball

= P (Not Red ball)

= 1 - P(Red ball)

$= 1 - \dfrac{5}{24} = \dfrac{19}{24}$

(iii) There are 4 green balls.

$\therefore$ Number of such favourable outcomes = 4

Probability of drawing a green ball

$= \dfrac{\text{Number of favourable outcomes}}{\text{Total number of possible outcomes}} = \dfrac{4}{24} = \dfrac{1}{6}$

Illustration 10.4

A coin is tossed 80 times and a tail occurs 43 times. Find the probability of getting (a) tail (b) head.

Sol. Total number of times coin is tossed = 80

Number of times a tail can occur = 80

(a) Number of times tail occurs = 43

Probability (tail) = $\dfrac{43}{80}$

(b) Number of times head occurs = 80 – 43 = 37

Probability (head) = $\dfrac{37}{80}$

Ask yourself

1. Probability of getting even number when we throw a dice.

2. Probability of getting king in a pack 52 cards.

3. Probability of getting vowel from the lettter of the word RESONANCE.

4. Probability of getting a two digit number from first 100 natural number.

5. If happening of an event is 0.3 then what is the probability that even will not occur?

Answers

1. $\dfrac{1}{2}$ **2.** $\dfrac{1}{13}$ **3.** $\dfrac{4}{9}$ **4.** $\dfrac{9}{10}$ **5.** 0.7

Add your knowledge

Probability and Area

Probability can also relate to the areas of geometric shapes. The following are some examples of probability that involve area of geometric shapes.

Example:

A die is dropped at random on the rectangular region as shown in figure. What is the probability that it will land inside the circle with diameter 1m ?
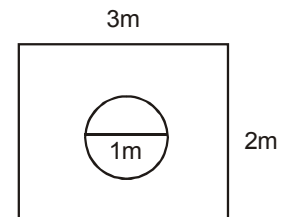
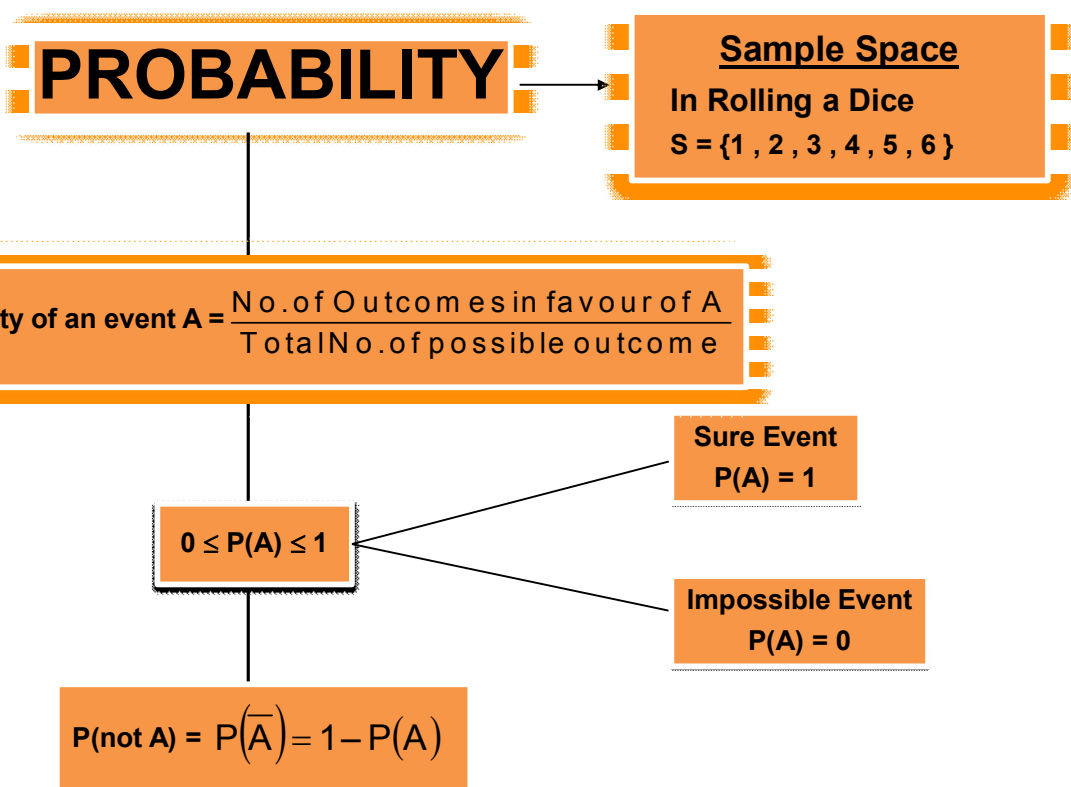**Sol.** Area of rectangular region = 3m × 2m = 6m²

Area of circle = πr^2

$$= \pi \times \left(\frac{1}{2}\right)^2$$

$$= \frac{\pi}{4} \text{ m}^2$$

∴ Probability that die will land inside the circle

$$= \frac{\text{area of circle}}{\text{area of rec}\tan\text{gle}} = \frac{\pi/4}{6} = \frac{\pi}{24}.$$

PROBABILITY

Sample Space
In Rolling a Dice
S = {1 , 2 , 3 , 4 , 5 , 6 }

Probability of an event A = $\dfrac{No.\,of\,Outcomes\,in\,favour\,of\,A}{Total\,No.\,of\,possible\,outcome}$

$0 \leq P(A) \leq 1$

Sure Event
P(A) = 1

Impossible Event
P(A) = 0

P(not A) = $P\left(\overline{A}\right) = 1 - P(A)$

Summary

1. **Probability :** Theory of probability deals with measurement of uncertainty of the occurrence of some event or incident in terms of percentage or ratio

2. The collection of all possible out comes of a random experiment is called a **sample space**

3. Trial means performing a random experiment.

4. The different possibilities which can occur during an experiment is called an outcome of an experiment.

5. (a) $0 \le P(A) \le 1$

   (b) P (not happening of A) + P (happening of A) = 1

   or $P(\bar{A}) + P(A) = 1$

   ∴ $P(\bar{A}) = 1 - P(A)$

6. **Probability of an event A** : Written as P(A) in a random experiment and is defined as :

   $$P(A) = \frac{\text{Number of outcomes in favour of A}}{\text{Total number of possible outcomes}}$$

7. (a) **Even chance :** If the chances of happening and not happening of an event are same, we say that the event has **even chances** of happening. For example, the chance of a newly born baby to be a girl is even.

   (b) **Sure (Certain) chance :** If we throw a die, there is a sure chance of getting one of the numbers 1, 2, 3, 4, 5 or 6. Such events are called **sure events**.

   (c) **Impossible (No) chance :** There is no chance that it will rain everyday in Delhi in one year. Such events are called **impossible events**.

   (d) **Good chance :** If an event is more likely to happen than not to happen, it is said to have **good chance** of happening.

   (e) **Poor chance :** If an event is less likely to happen than not to happen, it is said to have **poor chance** of happening.

EXERCISE » 01

SECTION -A (FIXED RESPONSE TYPE)

MULTIPLE CHOICE QUESTIONS

(Q.1 – Q.4) Study the following statement carefully and choose the appropriate answer.

For the experiment in rolling a die :

1. Probability of getting 2.

(A) 1   (B) 2   (C) 0   (D) $\dfrac{1}{6}$

2. Probability of getting not 5.

(A) 1   (B) $\dfrac{1}{2}$ (C) $\dfrac{5}{6}$ (D) $\dfrac{1}{6}$

3. Probability of getting 7.

(A) 1   (B) $\dfrac{1}{2}$ (C) $\dfrac{5}{6}$ (D) 0

4. Probability of getting number less than 7.

(A) 1   (B) $\dfrac{1}{2}$ (C) 0   (D) $\dfrac{1}{6}$

5. Which one of the following cannot be the probability of an event.

(A) $\dfrac{2}{5}$ (B) 0.2   (C) $\dfrac{5}{2}$ (D) $\dfrac{2}{77}$

6. The probability of getting Sunday after Monday is :

(A) 1   (B) 0.5   (C) 0.25   (D) 0

7. The probability of getting a red from a well-shuffled pack of cards will be

(A) $\dfrac{1}{52}$ (B) $\dfrac{1}{2}$ (C) $\dfrac{1}{4}$ (D) 4

8. A die is thrown.What is the probability of getting a number less than 6.

(A) $\dfrac{1}{2}$ (B) $\dfrac{5}{6}$ (C) $\dfrac{1}{6}$ (D) $\dfrac{1}{4}$

9. A die is thrown 10 times. The number 5 appears 3 times. What is the probability of getting number 5 ?

(A) $\dfrac{1}{2}$ (B) $\dfrac{3}{10}$ (C) $\dfrac{1}{6}$ (D) $\dfrac{3}{5}$

10. What is the probability of choosing a prime number from 1, 2, 3, 4, 5, 6, 7 ?

(A) $\dfrac{5}{7}$ (B) $\dfrac{4}{7}$ (C) $\dfrac{3}{7}$ (D) $\dfrac{6}{7}$

FILL IN THE BLANKS

1.   The maximum value of probability of an event is _____

2.   The probability of getting a head on tossing a coin is _____

3.   The probability of getting at least one head when two coins are tossed simultaneously is _____

4.   For an unbiased coin, probability of getting a tail is _____

5.   If a die is rolled, the probability of getting an even prime numbers is _____

6.   From the numbers 1 to 15, the probability of getting a prime number is _____

TRUE / FALSE

1.   Probability of an event can never be negative.

2.   Probability is always greater than 1.

3.   When a dice is thrown , the probability of getting a composite number is $\frac{1}{3}$

4.   The probability of getting an even number when a die is rolled is $\frac{1}{2}$.

5.   Probability of getting a prime number when a die is rolled is $\frac{1}{2}$.

MATCH THE COLUMN

1.   **Column – I**   **Column – II**

(A)   Getting a head when a coin is tossed   (p) $\frac{1}{3}$

(B)   Getting a natural number when a die is thrown   (q) $\frac{1}{2}$

(C)   Getting a number greater than 5 when a die is thrown   (r)   1

(D)   Getting a number greater than 6 when a die is thrown   (s) $\frac{1}{6}$

(E)   Getting a composite number when a die is thrown   (t)   0

SECTION -B (FREE RESPONSE TYPE)

VERY SHORT ANSWER TYPE

1.   What is the probability of choosing a vowel from the alphabet ?

2.   A number from 1 to 11 is choosen at random. What is the probability of choosing an odd number ?

3.   What is the probability of selecting 'W' from the letters of the word SWORD ?

4.   A die is thrown once. What is the probability of getting a number greater than 4 ?

SHORT ANSWER TYPE

5. In a world cup final match against Srilanka, for six times Sachin Tendulkar hits a six out of 30 balls he plays. What is the probability that in a given throw, the ball does not hit for a six?

6. If a card is picked at random from a standard pack of 52 cards, then what is the probability of getting a black card.

7. A bag contains 3 red balls, 5 black balls and 4 white balls. A ball is drawn random from the bag. What is the probability that the ball drawn is :
    (i) white   **(ii)** red   **(iii)** black.

8. There are 30 cards of same size in a bag on which numbers 1 to 30 are written. One card is taken out of the bag at random. Find the probability that the number on the selected card is not divisible by 3.

9. A glass jar contains 6 red, 5 green, 8 blue and 3 yellow marbles. If a single marble is chosen at random from the jar, what is the probability of choosing a red marble ? a green marble ? a blue marble? a yellow marble ?

10. Choose a number at random from 1 to 5.
    (i) What is the probability that the number chosen is even ?
    (ii) What is the probability that the number chosen is odd ?

11. From a well shaffled pack of 52 cards, find the probability of getting :
    (i) a queen   **(ii)** a red card

LONG ANSWER TYPE

12. Describe the chance of happening of each of the following events using the words :
    No chance, poor chance, even chance, good chance, sure chance.
    (i) If today is 15th September, tomorrow will be 16th September.
    (ii) A hundred people can fit into a car.
    (iii) A red pen is picked up from a bag containing 7 red pens and 3 black pens.
    (iv) India will win the match.
    (v) Getting 3 in a throw of a die .
    (vi) Three lines intersect at four points
    (vii) We can draw a triangle whose angles add up to 180º.

13. A box contains 20 balls bearing numbers, 1,2,3,4,.....20. A ball is drawn at random from the box. What is the probability that the number on the ball is
    (i) an odd number   **(ii)** divisible by 2 or 3
    (iii) prime number

14. A card is drawn from a well shuffled deck of 52 cards. Find the probability of
(i)	A king.	**(ii)**	A heart.
(iii)	A seven of heart.	**(iv)**	A jack, queen or a king.
(v)	A two of heart or a two of diamond.	**(vi)**	A face card.
(vii)	A black card.	**(viii)**	Neither a heart nor a king.
(ix)	Neither an ace nor a king.		

EXERCISE ≫ 02

MULTIPLE CHOICE QUESTIONS

1. Two dice are thrown simultaneously. Find the probability of getting a doublet of even number.

   (A) $\dfrac{1}{6}$ (B) $\dfrac{1}{9}$ (C) $\dfrac{1}{12}$ (D) None of these

2. A die is thrown twice. The probability of the sum being odd, is

   (A) $\dfrac{1}{2}$ (B) $\dfrac{1}{3}$ (C) $\dfrac{1}{4}$ (D) $\dfrac{1}{6}$

3. A number x is chosen at random from the numbers $-3, -2, -1, 0, 1, 2, 3$. The probability that $|x| < 2$ is :

   (A) $\dfrac{5}{7}$ (B) $\dfrac{3}{7}$ (C) $\dfrac{2}{7}$ (D) $\dfrac{1}{7}$

4. All the three face cards of spades are removed from a well-shuffled pack of 52 cards. A card is then drawn at random from the remaining pack. Find the probability of getting black face card.

   (A) $\dfrac{6}{49}$ (B) $\dfrac{3}{49}$ (C) $\dfrac{5}{49}$ (D) $\dfrac{4}{49}$

5. What is the probability that an ordinary year has 53 Sundays ?

   (A) $\dfrac{53}{365}$ (B) $\dfrac{1}{7}$ (C) $\dfrac{2}{7}$ (D) $\dfrac{48}{53}$

6. Tickets numbered from 1 to 20 are mixed up and a ticket is drawn at random. What is the probability that the ticket drawn has a number which is a multiple of 3 or 7 ?

   (A) $\dfrac{1}{15}$ (B) $\dfrac{1}{2}$ (C) $\dfrac{2}{5}$ (D) $\dfrac{7}{20}$

7. A bag contains 5 red balls and some blue balls. If the probability of drawing a blue ball is double that of a red ball, then find the number of blue balls in the bag

   (A) 8 (B) 10 (C) 12 (D) 14

8. The probability of selecting a green marble at random from a jar that contains only green, white and yellow marbles is 1/4. The probability of selecting a white marble at random from the same jar is 1/3. If this jar contains 10 yellow marbles. What is the total number of marbles in the jar?

   (A) 24 (B) 20 (C) 16 (D) 12

9. If we remove all the face card from 52 pack of cards then what is the probability of getting red card

   (A) $\dfrac{1}{2}$ (B) $\dfrac{1}{4}$ (C) $\dfrac{1}{3}$ (D) $\dfrac{1}{5}$

10. A number x is selected from the group 1,2,3,4 and another number y is selcted from 3,4,5,6 then what is the probability that the x+y is greater than 6

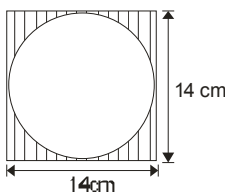   (A) $\dfrac{1}{2}$ (B) $\dfrac{5}{8}$ (C) $\dfrac{3}{16}$ (D) $\dfrac{1}{5}$

SECTION -B (TECHIE STUFF)

1. A dart is thrown at random onto a board that has the shape of circle as shown below. Calculate the probability that dart will hit the shaded region.
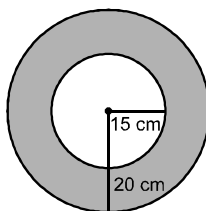
(A) $\dfrac{7}{16}$ (B) $\dfrac{7}{8}$ (C) $\dfrac{3}{16}$ (D) $\dfrac{13}{16}$

2. A circle is inscribed in a square of side 14 cm then what is the probability that the point will be chosen from the shaded region?

(A) $\dfrac{3}{16}$ (B) $\dfrac{3}{14}$ (C) $\dfrac{5}{14}$ (D) $\dfrac{13}{16}$

EXERCISE » 03

(PREVIOUS YEAR EXAMINATION QUESTIONS)

1. There are 8 marbles in a box with numbers 1 to 8 marked on them. What is the probability of drawing a marble with number 2? **[IMO-2011]**

(A) $\dfrac{1}{8}$ (B) $\dfrac{1}{6}$ (C) $\dfrac{1}{4}$ (D) $\dfrac{1}{5}$

2. The probability of raining on day 1 is 0.3 and on day 2 is 0.2 . What is the proabbility of raining on both the day ? **[NSTSE 2012]**

(A) 0.06   (B) 0.20   (C) 0.25   (D) 0.30

Direction (Q.No. 3 - 4) : A fair dice has faces numbered 0, 1, 7, 3, 5 and 9. If it is thrown, the probability of getting **[IMO-2013]**

3. a 1 is _____

(A) $\dfrac{2}{5}$ (B) $\dfrac{1}{6}$ (C) $\dfrac{1}{2}$ (D) $\dfrac{3}{5}$

4. an odd number is **[IMO-2013]**

(A) 1   (B) $\dfrac{2}{3}$ (C) $\dfrac{5}{6}$ (D) $\dfrac{1}{6}$

5. Nine counters numbered 1 to 9 are placed in a bag. One is taken out at random. The probability that it is divisible by 3 is_____ **[IMO-2013]**

(A) $\dfrac{1}{2}$ (B) $\dfrac{1}{3}$ (C) $\dfrac{2}{9}$ (D) $\dfrac{4}{9}$

6. Garima collected the data regarding weights of students of her class and prepared the following table. **[IMO-2014]**

Weight (in kg)	44-49	50-55	56-61	62-67
Number of students	8	15	25	17

A student is to be selected randomly from her class for some competition. The probability of selection of the student is highest whose weight (in kg) is in the interval_____

(A) 44 - 49   (B) 56 - 61   (C) 50 - 55   (D) 62 - 67

7. The letters written on paper slips of the word MATHEMATICS are put in a bag. If one slip is drawn randomly. What is the probability that it bears the letter M? **[IMO-2014]**

(A) 3/11   (B) 2/5   (C) 7/9   (D) 2/11

8. Which of the following statements is INCORRECT? **[IMO-2014]**
(A) Mean, Median and Mode may be same for some data.
(B) The probability of getting an ace out of a deck of cards is less than 1.
(C) Mean of the data is always from the given data.
(D) Median of the data may or may not be from the given data.

ANSWER KEY »

EXERCISE » 01

SECTION -A (FIXED RESPONSE TYPE)

MULTIPLE CHOICE QUESTIONS

Ques.	1	2	3	4	5	6	7	8	9	10
Ans.	D	C	D	A	C	D	B	B	B	B

FILL IN THE BLANKS

1. 1   **2.** $\dfrac{1}{2}$ **3.** $\dfrac{3}{4}$ **4.** $\dfrac{1}{2}$ **5.** $\dfrac{1}{6}$

6. $\dfrac{2}{5}$

TRUE / FALSE

1. True   **2.** False   **3.** True   **4.** True   **5.** True

MATCH THE COLUMN

1. (A) – q, (B) – r, (C) – s, (D) – t, (E) – p

SECTION -B (FREE RESPONSE TYPE)

VERY SHORT ANSWER TYPE

1. $\dfrac{5}{26}$ **2.** $\dfrac{6}{11}$ **3.** $\dfrac{1}{5}$ **4.** $\dfrac{1}{3}$

SHORT ANSWER TYPE

5. $\dfrac{4}{5}$ **6.** $\dfrac{1}{2}$ **7.** (i) $\dfrac{1}{3}$ (ii) $\dfrac{1}{4}$ (iii) $\dfrac{5}{12}$

8. $\dfrac{2}{3}$ **9.** $\dfrac{3}{11}, \dfrac{5}{22}, \dfrac{4}{11}, \dfrac{3}{22}$ **10.** (i) $\dfrac{2}{5}$ (ii) $\dfrac{3}{5}$

11. (i) $\dfrac{1}{13}$ (ii) $\dfrac{1}{2}$

LONG ANSWER TYPE

12. **(i)** Sure chance   **(ii)** No chance   **(iii)** Good chance

      (iv) Even chance   **(v)** poor chance   **(vi)** No chances

      (vii) Sure chance

13. (i) $\dfrac{1}{2}$ (ii) $\dfrac{13}{20}$ (iii) $\dfrac{2}{5}$

14. (i) $\dfrac{1}{13}$ (ii) $\dfrac{1}{4}$ (iii) $\dfrac{1}{52}$ (iv) $\dfrac{3}{13}$ (v) $\dfrac{1}{26}$ (vi) $\dfrac{3}{13}$

(vii) $\dfrac{1}{2}$ (viii) $\dfrac{9}{13}$ (ix) $\dfrac{11}{13}$

EXERCISE » 02

SECTION -A (COMPETITIVE EXAMINATION QUESTION)

MULTIPLE CHOICE QUESTIONS

Ques.	1	2	3	4	5	6	7	8	9	10
Ans.	C	A	B	B	B	C	B	A	A	B

SECTION -B (TECHIE STUFF)

Ques.	11	12
Ans.	A	B

EXERCISE » 03

(PREVIOUS YEAR EXAMINATION QUESTIONS)

Ques.	1	2	3	4	5	6	7	8
Ans.	A	A	B	C	B	B	D	C